

=====

Sequence Listing was accepted.

If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2009; month=6; day=1; hr=14; min=38; sec=31; ms=696;]

=====

Application No: 10520033

Version No: 5.0

Input Set:**Output Set:****Started:** 2009-05-22 16:09:22.042**Finished:** 2009-05-22 16:09:26.512**Elapsed:** 0 hr(s) 0 min(s) 4 sec(s) 470 ms**Total Warnings:** 24**Total Errors:** 0**No. of SeqIDs Defined:** 30**Actual SeqID Count:** 30

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)
W 213	Artificial or Unknown found in <213> in SEQ ID (21)
W 213	Artificial or Unknown found in <213> in SEQ ID (22)
W 213	Artificial or Unknown found in <213> in SEQ ID (25)
W 213	Artificial or Unknown found in <213> in SEQ ID (26)

Input Set:

Output Set:

Started: 2009-05-22 16:09:22.042
Finished: 2009-05-22 16:09:26.512
Elapsed: 0 hr(s) 0 min(s) 4 sec(s) 470 ms
Total Warnings: 24
Total Errors: 0
No. of SeqIDs Defined: 30
Actual SeqID Count: 30

Error code

Error Description

This error has occurred more than 20 times, will not be displayed

SEQUENCE LISTING

<110> Chan, Lia Raquel
 Gonzalez, Daniel H.
 Dezar, Carlos A.
 Gago, Gabriela Marisa
 Dunan, Claudio Marcelo

<120> Transcription Factor Gene Induced by Water Deficit Conditions and
 Absciscic Acid from Helianthus Annuus, Promoter and Transgenic Plants

<130> 2510.0040000/JAG/SAC

<140> 10520033

<141> 2009-05-22

<150> PCT/US2003/013770

<151> 2003-05-02

<160> 30

<170> PatentIn version 3.1

<210> 1

<211> 774

<212> DNA

<213> Helianthus annuus

<400> 1

tcactagtac cataatattc acaaacacac acacctcaga aacgaagctt gcacataatg	60
tctctttcaac aagtaccac aacagaaaca accaccagga agaaccgaaa cgaggggcgg	120
aaacgattta ccgacaaaca aataagtttc ctagagtaca tgtttgagac acagtcgaga	180
cccgagttaa ggatgaaaca ccagttggca cataaactcg ggcttcatcc tcgtcaagtg	240
gcgatatggt tccagaacaa acgcgcgcga tcaaagtcga ggcagattga gcaagagtat	300
aacgcgctaa agcataacta cgagacgctt gcgtctaaat ccgagtctct aaagaaagag	360
aatcaggccc tactcaatca ggtatggttg caaacttaca atgttgcat caactattta	420
agtagttttg aatttttgtg acaataaaga ttgacaaatg ttgtttgata attgattaac	480
agttggaggt gctgagaaat gtagcagaaa agcatcaaga gaaaactagt agtagtgga	540
gcggtgaaga atcggatgat cggtttacga actctccgga cgttatgttt ggtcaagaaa	600
tgaatgttcc gttttgcgac ggttttgcgt actttgaaga aggaaacagt ttgttgaga	660
ttgaagaaca actgccagac cctcaaaagt ggtgggagtt ctaaagagta aagaaggatg	720
tagaagtagt agagtaaaaa ctaaacata ccagatagtt ggtttacact ttgt	774

<210> 2
 <211> 673
 <212> DNA
 <213> *Helianthus annuus*

<400> 2
 tcactagttac cataatattc acaaacacac acacctcaga aacgaagctt gcacataatg 60
 tctcttcaac aagtaccac aacagaaaca accaccagga agaaccgaaa cgaggggcgg 120
 aaacgattta ccgacaaaca aataagtttc ctagagtaca tgtttgagac acagtcgaga 180
 cccgagttaa ggatgaaaca ccagttggca cataaactcg ggcttcatcc tcgtcaagtg 240
 gcgatatggg tccagaacaa acgcgcgcga tcaaagtcga ggcagattga gcaagagtat 300
 aacgcgctaa agcataacta cgagacgctt gcgtctaat ccgagtctct aaagaaagag 360
 aatcaggccc tactcaatca gttggaggtg ctgagaaatg tagcagaaaa gcatcaagag 420
 aaaactagta gtagtggcag cggatgaaga tcggatgatc ggtttacgaa ctctccggac 480
 gttatgtttg gtcaagaaat gaatgttccg ttttgcgacg gttttgcgta ctttgaagaa 540
 ggaaacagtt tgttggagat tgaagaacaa ctgccagacc ctcaaaagtg gtgggagttc 600
 taaagagtaa agaaggatgt agaagtagta gagtaaaaac taaaacatac cagatagttg 660
 gtttacactt tgt 673

<210> 3
 <211> 1221
 <212> DNA
 <213> *Helianthus annuus*

<220>
 <221> promoter
 <222> (1)..(1221)
 <223> Large allele

<400> 3
 gatccaattg gaccacctgg cacatcgtat cttatctctt ttgtcgtttc caacacacca 60
 caacacacct acaaacgtgt caattcacac ttcaccaatt tcatttcctt ttagtcaatc 120
 atattaaaag tagtagcccc cccccatt tgttacctac catttccac ttttaataatc 180
 acccacgcta tgtccacttg tacttttgtt tgcacacaac tcttcccata aaatatcaaa 240
 ccaaattttt tttagtggaa aacaaattcc ccaaatagaa tactaacgaa attcatcgca 300
 tcagaatata ctcatctctg aacagtggcg aagcttgacg ttttcgacgg ggggtcggaa 360
 aacgtatgta cccgaaattt ctatagaatc ggggggtcga aaacgtatat acccaaaatt 420

tctatacgaa aactacatat ataacactac tgagcaaaaa gttcgggggt tcgggcgccc	480
ctcccggccc cttcaaagct tcgccaatgt ctctgaaccg aagaaaaccc tcactcgtct	540
actagccaat gaatcctcac cagggaaacc ctactcgtc ttactggact attggcgctt	600
cctaatggac tacttgcgaa attcaccaca tcgggataca ctcgtctact gcggtgaggt	660
aaaacccgct tggctcaagg atcgaaactag cgattgctgc ctactcgcct aatctcccat	720
catcaacagg tgccgccgaa acaaaatgct gggggcggga gttgaaccta ggtccagtga	780
cgcacccatg aatTTTTTTT ctagggatgc gaacgagtgg tttaaccata cttttaagag	840
gtgcgatcgg aaattttacc tataaaatac actaaaaaag ttccaagggt ccaccacccc	900
cttaacctaa gtccgccttt gtctggatca cgtgaaacat caggtctctc ccttaccagt	960
ccagctacga ctcatcgaca aaatatcaaa accatatgat tttagtttt atctcaaccg	1020
aaagtgacat catgacagag aatcgacata accaaaacgt gtaaacgtac aactcaccat	1080
tgcgttgaaa aggacaaaac aggtaggatt cttgtcaaat tcaacgcgta cacctgtgct	1140
tcctctaaac ccatacttt aagaaccttt ataaagacca ctactatat atacacatat	1200
ataatatcac ttatcaaacc c	1221

<210> 4
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Designed oligonucleotide having a Hind III site

<400> 4	
gcgaagcttg atgcgaacga gtggttta	28

<210> 5
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Designed oligonucleotide having a Sal I site

<400> 5	
gcggtcgaca cctggcacat cgtatctt	28

<210> 6
 <211> 27
 <212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide having a Bam HI site

<400> 6

cgcggatccg agggtttgat aagtgat 27

<210> 7

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide having a Hind III site

<400> 7

cccaagctta acctaagtcc gcctttg 27

<210> 8

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide having a Hind III site

<400> 8

ggcaagctta tctcaaccga aagtgac 27

<210> 9

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Designed oligonucleotide based on the 5' promoter

<400> 9

atttcgcaag tagtcatt 19

<210> 10

<211> 1015

<212> DNA

<213> Helianthus annuus

<400> 10

gatccaattg gaccacctgg cacatcgat cttatctctt ttgtcgtttc caacacacca 60

caacacacct acaaacgtgt caattcacac ttcaccaatt tcatttcctt ttagtcaatc 120

atattaaaag tagtagcccc cccccatt tgttacctac catttccac ttaataatc 180

accacgcta tgtccacttg tacttttgtt tgcacacaac tcttcccata aaatatcaaa	240
ccaaattttt tttaatggaa aacaaatact tcaaatgcac tattggtgaa attcaccaca	300
tcagaataca cccgtctcta ctcatctact ggccaacgaa tcttcacggg ggaaaccctc	360
actcgtctac tgggactact ggcgcttcaa aatggactac tgacaaaatt caccacatcg	420
ggatacactt gtctactgcg gtgaggtaaa atccgccgct cagctcaatg atcgaactag	480
cgatcgccac ccactcacct tgtctcccat catcaccagg tgccgccaaa acaaaatgtt	540
gggggcgga attgaaccta ggtccagtgg cgcacccatg aatttttttt ctagggatgc	600
gaacgagtga ttttaaccata cttttaagag gtgcgatcgg aaattttacc tataaaatat	660
actaaaaaaaa tttcaagggt ccgcccaccc accccttaac ctaagtccgc ctctgcctgg	720
atcacgtgaa acatcaggtc tctctcttac cagttcacct acaactcatt gacaaaatat	780
caaaaccata tgattttgag ttttatctca accgaaagtg acatcatgac agagaatcga	840
cataaccaaa acgtgtaaac gtacaactca ccattgcgtt gaaaaggaca aaacaggtag	900
gattcttgtc aaattcaacg cgtacacctg tgcttcatct aaacccata ctttaagaac	960
ctttataaag accactcact atatatacac atatataata tcacttatca aaccc	1015

<210> 11
 <211> 28
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Designed oligonucleotide having a Bam HI site

<400> 11	
ggcggatcca acagaaacaa ccaccagg	28

<210> 12
 <211> 29
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Designed oligonucleotide having a Bam HI site

<400> 12	
ggcggatccc ctggtggttg tttctgttg	29

<210> 13
 <211> 34
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Designed oligonucleotide having a Xho I site

<400> 13
gaggactcga gctcaagttt tttttttttt tttt 34

<210> 14
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

<223> Designed Oligonucleotide having a Xho I site

<400> 14
gaggactcga gctcaagc 18

<210> 15
<211> 29
<212> DNA
<213> Artificial Sequence

<220>

<223> Designed oligonucleotide having an Eco RI site

<400> 15
gccgaattca gattgagcaa gagtataac 29

<210> 16
<211> 19
<212> DNA
<213> Artificial Sequence

<220>

<223> Designed oligonucleotide based on the promoter

<400> 16
acctttataa agaccactc 19

<210> 17
<211> 19
<212> DNA
<213> Artificial Sequence

<220>

<223> Designed oligonucleotide based on the promoter

<400> 17
acgcaatggt gagttgtac 19

<210> 18
<211> 24

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Designed oligonucleotide to DNA-binding assays

 <400> 18
 aattcagatc tcaataattg agag 24

 <210> 19
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Designed oligonucleotide to DNA-binding assays

 <400> 19
 gatcctctca attattgaga tctg 24

 <210> 20
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Designed Oligonucleotide having a Bam HI site

 <400> 20
 gcgggatcca ccatgtctct tcaacaagta 30

 <210> 21
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Designed Oligonucleotide having a Sac I site

 <400> 21
 gccgagctct tagaactcca accacttttg 30

 <210> 22
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Designed Oligonucleotide having a Bam HI site

 <400> 22
 ggcggatccg tctcccagtt gttcttc 27

<210> 23
<211> 9
<212> DNA
<213> Helianthus annuus

<220>
<221> misc_feature
<222> (5)..(5)
<223> n is a or t

<400> 23
caatnattg

9

<210> 24
<211> 181
<212> PRT
<213> Helianthus annuus

<400> 24

Met Ser Leu Gln Gln Val Pro Thr Thr Glu Thr Thr Thr Arg Lys Asn
1 5 10 15

Arg Asn Glu Gly Arg Lys Arg Phe Thr Asp Lys Gln Ile Ser Phe Leu
20 25 30

Glu Tyr Met Phe Glu Thr Gln Ser Arg Pro Glu Leu Arg Met Lys His
35 40 45

Gln Leu Ala His Lys Leu Gly Leu His Pro Arg Gln Val Ala Ile Trp
50 55 60

Phe Gln Asn Lys Arg Ala Arg Ser Lys Ser Arg Gln Ile Glu Gln Glu
65 70 75 80

Tyr Asn Ala Leu Lys His Asn Tyr Glu Thr Leu Ala Ser Lys Ser Glu
85 90 95

Ser Leu Lys Lys Glu Asn Gln Ala Leu Leu Asn Gln Leu Glu Val Leu
100 105 110

Arg Asn Val Ala Glu Lys His Gln Glu Lys Thr Ser Ser Ser Gly Ser
115 120 125

Gly Glu Glu Ser Asp Asp Arg Phe Thr Asn Ser Pro Asp Val Met Phe
130 135 140

Gly Gln Glu Met Asn Val Pro Phe Cys Asp Gly Phe Ala Tyr Phe Glu
145 150 155 160

Glu Gly Asn Ser Leu Leu Glu Ile Glu Glu Gln Leu Pro Asp Pro Gln
165 170 175

Lys Trp Trp Glu Phe
180

<210> 25

<211> 99

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Hd-Zip domain of Athb-1

<400> 25

Leu Pro Glu Lys Lys Arg Arg Leu Thr Thr Glu Gln Val His Leu Leu
1 5 10 15

Glu Lys Ser Phe Glu Thr Glu Asn Lys Leu Glu Pro Glu Arg Lys Thr
20 25 30

Gln Leu Ala Lys Lys Leu Gly Leu Gln Pro Arg Gln Val Ala Val Trp
35 40 45

Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys Gln Leu Glu Arg Asp
50 55 60

Tyr Asp Leu Leu Lys Ser Thr Tyr Asp Gln Leu Leu Ser Asn Tyr Asp
65 70 75 80

Ser Ile Val Met Asp Asn Asp Lys Leu Arg Ser Glu Val Thr Ser Leu
85 90 95

Thr Glu Lys

<210> 26

<211> 99

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Hd-Zip domain of Athb-6

<400> 26

Leu Ser Glu Lys Lys Arg Arg Leu Ser Ile Asn Gln Val Lys Ala Leu
1 5 10 15

Glu Lys Asn Phe Glu Leu Glu Asn Lys Leu Glu Pro Glu Arg Lys Val
20 25 30

Lys Leu Ala Gln Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Val Trp
35 40 45

Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys Gln Leu Glu Lys Asp
50 55 60

Tyr Gly Val Leu Lys Thr Gln Tyr Asp Ser Leu Arg His Asn Phe Asp
65 70 75 80

Ser Leu Arg Arg Asp Asn Glu Ser Leu Leu Gln Glu Ile Ser Lys Leu
85 90 95

Lys Thr Lys

<210> 27

<211> 99

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Hd-Zip domain of Athb-7

<400> 27

Asn Lys Asn Asn Gln Arg Arg Phe Ser Asp Glu Gln Ile Lys Ser Leu
1 5 10 15

Glu Met Met Phe Glu Ser Glu Thr Arg Leu Glu Pro Arg Lys Lys Val
20 25 30

Gln Leu Ala Arg Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Ile Trp
35 40 45

Phe Gln Asn Lys Arg Ala Arg Trp Lys Ser Lys Gln Leu Glu Thr Glu
50 55 60

Tyr Asn Ile Leu Arg Gln Asn Tyr Asp Asn Leu Ala Ser Gln Phe Glu
65 70 75 80

Ser Leu Lys Lys Glu Lys Gln Ala Leu Val Ser Glu Leu Gln Arg Leu
85 90 95

Lys Glu Ala

<210> 28

<211> 99

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Hd-Zip domain of Athb-12

<400> 28

Lys Ser Asn Asn Gln Lys Arg Phe Asn Glu Glu Gln Ile Lys Ser Leu
1 5 10 15

Glu Leu Ile Phe Glu Ser Glu Thr Arg Leu Glu Pro Arg Lys Lys Val
20 25 30

Gln Val Ala Arg Glu Leu Gly Leu Gln Pro Arg Gln Met Thr Ile Trp
35 40 45

Phe Gln Asn Lys Arg Ala Arg Trp Lys Thr Lys Gln Leu Glu Lys Glu
50 55 60

Tyr Asn Thr Leu Arg Ala Asn Tyr Asn Asn Leu Ala Ser Gln Phe Glu
65 70 75 80

Ile Met Lys Lys Glu Lys Gln Ser Leu Val Ser Glu Leu Gln Arg Leu
85 90 95

Asn Glu Glu

<210> 29

<211> 99

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic Hd-Zip domain of Hahb-4

<400> 29

Arg Asn Glu Gly Arg Lys Arg Phe Thr Asp Lys Gln Ile Ser Phe Leu
1 5 10 15

Glu Tyr Met Phe Glu Thr Gln Ser Arg Pro Glu Leu Arg Met Lys His
20 25 30

Gln Leu Ala His Lys Leu Gly Leu His Pro Arg Gln Val Ala Ile Trp
35 40 45

Phe Gln Asn Lys Arg Ala Arg Ser Lys Ser Arg Gln Ile Glu Gln Glu
50 55 60

Tyr Asn Ala Leu Lys His Asn Tyr Glu Thr Leu Ala Ser Lys Ser Glu
65 70 75 80

Ser Leu Lys Lys Glu Asn Gln Ala Leu Leu Asn Gln Leu Glu Val Leu
85 90 95

Arg Asn Val

<210> 30

<211> 66

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic fragment of Hahb-4

<400> 30

Ala Glu Lys His Gln Glu Lys Thr Ser Ser Ser Gly Ser Gly Glu Glu
1 5 10 15

Ser Asp Asp Arg Phe Thr Asn Ser Pro Asp Val Met Phe Gly Gln Glu
20 25 30

Met Asn Val Pro Phe Cys Asp Gly Phe Ala Tyr Phe Glu Glu Gly Asn
35 40 45

Ser Leu Leu Glu Ile Glu Glu Gln Leu Pro Asp Pro Gln Lys Trp Trp
50 55 60

Glu Phe

65